

## ABSTRACT

A catalyst for use in producing an unsaturated aldehyde and an unsaturated carboxylic acid which is excellent in catalyst activity and selectivity to the unsaturated aldehyde and the unsaturated carboxylic acid, a method for producing such a catalyst and a method for producing an unsaturated aldehyde and an unsaturated carboxylic acid by using such a catalyst are provided. A method for producing a catalyst containing at least molybdenum, bismuth and iron for use in producing an unsaturated aldehyde and an unsaturated carboxylic acid through gas-phase catalytic oxidation of propylene, isobutylene, tertiary butyl alcohol or methyl tertiary butyl ether with molecular oxygen comprises the steps of kneading particles containing catalyst components, an organic binder and a liquid and extrusion molding the resultant kneaded mixture, the organic binder containing at least a high-viscosity organic binder having a viscosity (of its 1% water solution or dispersion at 20°C) of from 5,000 mPa·s to 25,000 mPa·s and a low-viscosity organic binder having a viscosity (of its 1% water solution or dispersion at 20°C) of from 10 mPa·s to less than 5,000 mPa·s.